REMARKS

STATUS SUMMARY

Claims 1–10 and 12–20 are pending in the present application. The Examiner has required that the specification be updated with respect to the related, pending applications. The Examiner has rejected claims 1-20 under 35 U.S.C. § 112, second paragraph, and has also rejected claims 1-20 under the judicially created doctrine of obviousness-type double patenting as to U.S. Patent Nos. 6,680,695, 6,466,161, 6,707,423, and Application No. 10/775,870, and also U.S. Patent No. 6,529,829 in view of U.S. Patent No. 6,529,829 to *Oshizawa et al.* ("*Oshizawa*"), The Examiner has also rejected claims 1-20 under 35 U.S.C § 102(e) as being anticipated by U.S. Patent No. 6,788,251 to *Townsend et al.* ("*Townsend*"), and also by U.S. Patent No. 5,995,042 to *Durboraw, III et al.* ("*Durboraw*").

These formal matters identified in the Office Action are addressed herein below.

AMENDMENTS TO SPECIFICATION

Amendments have been made to the first paragraph on page 9, the first and third paragraphs on page 11, and the last paragraph on page 12 of the specification. These amendments have been made to correct references to numbers in the drawings and to improve grammar and clarity in the specification. No new matter is believed to have been added by these amendments.

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AMENDMENTS TO CLAIMS 3, 4, 5, 6, 7, 15, AND 20

Minor amendments have been made to claims 3, 4, 5, 6, 7, 15, and 20 to improve grammar, clarity, or claim form. Specifically, claims 5, 6, and 20 were amended by changing the term "comprising" to "consisting of" with reference to groups, and the other changes are corrections of minor grammatical errors. None of these amendments to the claims referred to in this section have been made in response to a substantive rejection or for any other purpose relating to patentability. The amendments made to the claims are believed to be fully supported by the present application as originally filed. Accordingly, no new matter is believed to have been added by these amendments.

CLAIM REJECTION - 35 U.S.C. § 112, SECOND PARAGRAPH

Claims 1–10 and 12–20 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention. Specifically, the Examiner states that claims 1, 2, 5, 7, 9, and 15 have either missing text, grammatical errors, or indefinite language.

Accordingly, Applicant has amended claim 1 by correcting a typographical error and adding text, claim 2 by correcting a grammatical error, claim 5 by adding text, claim 7 by deleting an unnecessary parenthesis, and claims 9 and 15 by correcting grammatical errors. In view of the foregoing, Applicant respectfully submits that the rejection of claims 1–10 and 12–20 under 35 U.S.C. § 112, second paragraph, has been overcome, and requests that this rejection be withdrawn.

CLAIM REJECTIONS – DOUBLE PATENTING

I.   Claims 1–10 and 12–20 are rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,680,695 entitled "COMMUNICATIONS SYSTEM THAT REDUCES AUTO-CORRELATION OR CROSS-CORRELATION IN WEAK SIGNALS," by Gregory B. Turetzky, et al., issued January 20, 2004.

In response, Applicants respectfully disagree that 1–10 and 12–20 of the present application are not patentably distinct from claims 1-20 of U.S. Patent No. 6,680,695. Claims 1-20 of the latter discloses a communications system comprising a transceiver and GPS receiver, while the present application discloses a communications system that does not include these two elements. In view of the foregoing, Applicants respectfully submit that the rejection of claims 1-10 and 12-20 based on double patenting under U.S. Patent No. 6,680,695 is now overcome, and requests that this rejection be withdrawn.

II.   Claims 1–10 and 12–20 are also rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,466,161 entitled "LOCATION SERVICES SYSTEM THAT REDUCES AUTO-CORRELATION OR CROSS-CORRELATION IN WEAK SIGNALS," by Gregory B. Turetzky, et al., issued January 20, 2004.

In response, Applicants respectfully disagree that 1–10 and 12–20 of the present application are not patentably distinct from claims 1-20 of U.S. Patent No. 6,466,161. Claims 1-20 of the latter discloses a location services system comprising a GPS receiver and means for

informing a user of the location services system the position of the GPS receiver, while the present application discloses a communications system that does not include these two elements. In view of the foregoing, Applicants respectfully submit that the rejection of claims 1-10 and 12-20 based on double patenting under U.S. Patent No. 6,466,161 is now overcome, and requests that this rejection be withdrawn.

III.   Claims 1–10 and 12–20 are rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,707,423 entitled "LOCATION SERVICES SYSTEM THAT REDUCES AUTO-CORRELATION OR CROSS-CORRELATION IN WEAK SIGNALS," by Gregory B. Turetzky, et al., issued March 16, 2004.

In response, Applicants respectfully disagree that 1–10 and 12–20 of the present application are not patentably distinct from claims 1-20 of U.S. Patent No. 6,707,423. Claims 1-20 of the latter discloses a location services system comprising a GPS receiver and means for informing a user of the location services system the position of the GPS receiver, while the present application discloses a communications system that does not include these two elements. In view of the foregoing, Applicants respectfully submit that the rejection of claims 1-10 and 12-20 based on double patenting under U.S. Patent No. 6,707,423 is now overcome, and requests that this rejection be withdrawn.

IV.   Claims 1–10 and 12–20 are also rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of co-pending U.S. Patent Application Serial No. 10/775,870 entitled "LOCATION SERVICES SYSTEM THAT REDUCES

AUTO-CORRELATION OR CROSS-CORRELATION IN WEAK SIGNALS," by Gregory B. Turetzky, et al., filed January 20, 2004.

In response, Applicants respectfully disagree that 1–10 and 12–20 of the present application are not patentably distinct from claims 1-20 of Application Serial No. 10/775,870. Claims 1-20 of the latter discloses a location services system and means for informing a user of the location services system the position of the GPS receiver, while the present application discloses a communications system that does not include that additional element. In view of the foregoing, Applicants respectfully submit that the rejection of claims 1-10 and 12-20 based on double patenting under Application Serial No. 10/775,870 is now overcome, and requests that this rejection be withdrawn.

V. Claims 1–10 and 12–20 are also rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,529,829 entitled "DEAD RECKONING SYSTEM THAT REDUCES AUTO-CORRELATION OR CROSS-CORRELATION IN WEAK SIGNALS," by Gregory B. Turetzky, et al., issued February 10, 2004, in view of *Oshizawa*.

In response, Applicants respectfully disagree that 1–10 and 12–20 of the present application are not patentably distinct from claims 1-20 of U.S. Patent No. 6,529,829. Claims 1-20 of the latter discloses a dead reckoning system comprising a GPS receiver and at least one sensor for providing a dead reckoning input to the GPS receiver, while the present application discloses a communications system that does not include these two elements. In view of the foregoing, Applicants respectfully submit that the rejection of claims 1-10 and 12-20 based on

double patenting under U.S. Patent No. 6,529,829 is now overcome, and requests that this rejection be withdrawn.

RESPONSE TO CLAIM REJECTIONS UNDER 35 USC § 102(e)

I. The Examiner has rejected claims 1-10 and 12-20 under 35 U.S.C §102(e) as being anticipated by U.S. Patent No. 6,788,251 to *Townsend et al.* (*"Townsend"*). MPEP § 2131 provides:

> "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). ... "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, ...

Townsend does not teach each and every claimed element of claims 1-10 and 12-20.

Therefore, Applicants respectfully traverse these rejections.

CLAIM 1

Independent claim 1(as amended) discloses:

> A communications system, comprising:
>
> a first data path to a CPU for correlating an incoming GPS signal, located within a scanned signal window, with a locally generated signal; and
>
> a second data path to a CPU for verifying the incoming GPS signal, located within the scanned signal window, against a lock signal, the second data path determining whether the incoming GPS signal has at least one characteristic that differentiates the incoming GPS signal from an auto-correlated signal or a cross-related signal, wherein the locally generated signal can change in order to continue

to search the scanned signal window for a second incoming GPS signal if the incoming GPS signal lacks the at least one characteristic.

The Examiner states that in *Townsend*, "Figure 8 represents the steps/means for operating the system including a first path comprised of the output of memory 4 (804) directed to signal correlation and tracking unit 13 (813), which reads on the claimed first path, and second path comprised of the output of memory 4 (804), correlator 13 (813), "ghost satellite cancellation" signal, subtractor 5 (805), filter block 6 (806), non-coherent accumulator 8 (808), and iterating estimator of pseudoranges 9 (809), which reads on the claimed second path."

In response, Applicants respectfully disagree that *Townsend* teaches each and every aspect of the claimed invention in claim 1 either explicitly or impliedly as required under 35 U.S.C. § 102(e) and MPEP §§ 706 and 2131.

In general, *Townsend* discloses a positioning system that is configured to receive assistance signals provided by, for example, a terrestrial broadcast station. (Col. 3, lines 13-21.) *Townsend* solves the problem of "ghost" satellites by having dual paths for correlation, with one path a conventional correlator used to look for energy from the correlation of the desired signal. If any signal is found in the correlation, it is presumed to be a "ghost" signal, and the first correlator path inverts this signal and provides it to the second correlator path where a subtractor cancels out the potential ghost signal leaving only presumably the desired signal. (Col. 8, lines 5-14.)

In FIG. 8 of *Townsend*, which is a positioning system according to an embodiment of the invention, the value to be subtracted is generated by signal correlation and tracking

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block 13 (813), and a numerical representation of the undesired signal may be subtracted from the digital samples stored in memory at difference block 5 (805). (Col. 8, line 67, to Col. 9, lines 1-5.) The output of difference block 5 (805) is then applied at filter block 6 (806), and the process continues along the first correlation path. (Col. 9, lines 6-17.) In summary, *Townsend* uses the conventional correlator path to generate a "ghost" signal and remove it at the difference block 5 (805), rather than avoiding the "ghost" signals by setting a limit range for a signal to be detected. (Col. 9, lines 42-48.)

In contrast, claim 1, in a second data path, determines "whether the incoming GPS signal has at least one characteristic that differentiates the incoming GPS signal from an auto-correlated signal or a cross-related signal, wherein the locally generated signal can change in order to continue to search the scanned signal window for a second incoming GPS signal if the incoming GPS signal lacks the at least one characteristic." By differentiating the incoming GPS signal from an auto-correlated signal or a cross-related signal for at least one characteristic, the communications system of claim 1 has determined whether an auto-correlation event or cross-correlation event has occurred.

Therefore, *Townsend* fails to teach or describe all of Applicants' claim limitations in independent claim 1. Thus independent claim 1 is in condition for allowance. Claims 2-10 and 12-20 depend directly or indirectly from allowable claim 1, and therefore are distinguishable over Townsend for at least the same reasons.

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In view of the foregoing, Applicants respectfully submit that claims 1-10 and 12-20 are patentable under 35 U.S.C. § 102(e) over *Townsend*, and respectfully request that the rejection of these claims under 35 U.S.C. § 102(e) be withdrawn.

II. The Examiner has also rejected claims 1-10 and 12-20 under 35 U.S.C §102(e) as being anticipated by U.S. Patent No. 5,995,042 to *Durboraw, III et al.* ("*Durboraw*"). Again, *Durboraw* does not teach each and every claimed element of claims 1-10 and 12-20. Therefore, Applicants respectfully traverse these rejections.

The Examiner states that *Durboraw* teaches "an integrated unit combining GPS and wireless communication wherein the GPS portion includes first and second paths coupled to a central processing unit 115 via the path from the RF circuit to the C/A unit to the CPU and the path from the RF circuit to the C/A unit to the noise detector/RAIM circuit to the processor."

In response, Applicants respectfully disagree that *Durboraw* teaches each and every aspect of the claimed invention in claim 1 either explicitly or impliedly as required under 35 U.S.C. § 102(e) and MPEP §§ 706 and 2131.

In general, *Durboraw* discloses a GPS receiver used in conjunction with a Search and Rescue (SAR) transceiver system, and in particular, to power conservation in GPS radios. (Col. 1, lines 6-13.) FIG. 2 is a block diagram of a SAR transceiver 102 having an RF circuit 112, a C/A code module 113, a Receiver Autonomous Integrity Monitor (RAIM) module 124, and a noise detector 114. (Col. 5, line 64, to col. 6, line 10.) In general, in the absence of a spoofing signal, the C/A code module 113 is used to provide location and time information. (Col. 3, lines 60-65.) When spoofing, which is a form of jamming where attempts are made to fool the receiver

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into accepting erroneous information, is detected, a high security module 116 is powered up. (Col. 7, lines 34-40.)

Thus, *Durboraw* does not teach a first and a second data path, where an incoming signal is correlated in the first data path, and the incoming signal is verified in the second data path. Nor does *Durboraw* change a "locally generated signal ... in order to continue to search the scanned signal window for a second incoming GPS signal if the incoming GPS signal lacks the at least one characteristic." *Durboraw*, in general, detects an interference signal, which may be a spoofing signal, and then selects a processing module dependent on the state of the detection.

Therefore, *Durboraw* fails to teach or describe all of Applicants' claim limitations in independent claim 1. Thus independent claim 1 is in condition for allowance. Claims 2-10 and 12-20 depend directly or indirectly from allowable claim 1, and therefore are distinguishable over Townsend for at least the same reasons.

In view of the foregoing, Applicants respectfully submit that claims 1-10 and 12-20 are patentable under 35 U.S.C. § 102(e) over *Durboraw*, and respectfully request that the rejection of these claims under 35 U.S.C. § 102(e) be withdrawn.

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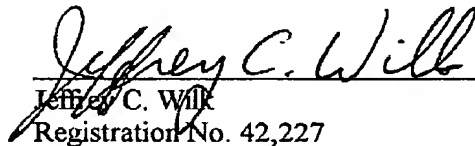10/712,789

CONCLUSION

In light of the above amendments and remarks, it is respectfully submitted that the present application is now in proper condition for allowance, and an early notice to such effect is earnestly solicited.

If any small matter should remain outstanding after the Patent Examiner has had an opportunity to review the above Remarks, the Patent Examiner is respectfully requested to telephone the undersigned patent attorney in order to resolve these matters and avoid the issuance of another Official Action.

Respectfully submitted,
Turetzky et al.

Date: __December 23, 2005__   By: _____

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